

SCHOTT is an international technology group developing and manufacturing specialized materials, components and systems particularly for the household appliance, pharmaceutical, solar energy, electronics, optics and automotive industries. Some 17,300 employees at manufacturing and sales sites in 41 countries generated global sales of 2.2 billion euros during the 2007/2008 fiscal year.

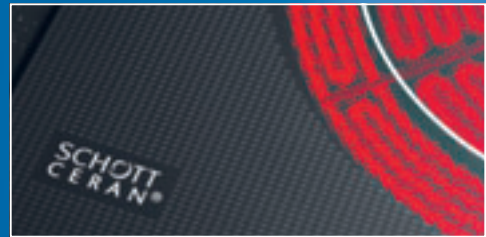
**Our innovative technologies
have made history in glass.
For 125 years
and on into the future.**

SCHOTT North America, Inc.
Corporate Office
555 Taxter Road
Elmsford, NY 10523
Phone: 914.831.2200
Fax: 914.831.2201
E-mail: info@us.schott.com
www.us.schott.com

SCHOTT
glass made of ideas

SCHOTT 1884–2009

Historical and Technological
Milestones



90331 USA 02095.0 kom/ben Printed in Germany



SCHOTT
glass made of ideas

Historical Milestones

1884

Otto Schott, Ernst Abbe and Carl and Roderich Zeiss found the Schott & Associates Glass Technology Laboratory in Jena, Germany.

1889

Ernst Abbe founds the Carl-Zeiss-Stiftung (Carl Zeiss Foundation).

1891/1919

The glassworks in Jena become a foundation-owned enterprise. Its sole owner is the Carl-Zeiss-Stiftung.

1900

SCHOTT already achieves half of its sales with exports.

1927/1930

The first subsidiaries:
Farbenglaswerke Zwiesel und Pirna (1927),
Deutsche Spiegelglas AG (DESAG)
in Grünenplan (1930),
Glaswerk Mitterteich (1930).

1945

“The Odyssey of 41 Glassmakers“: After the end of World War II, American troops bring the management and selected experts from Jena to West Germany.

1948

The original factory in Jena (Soviet zone of occupation/GDR as of 1949) is expropriated and converted into a state-owned company (VEB).

1952

The foundation enterprise is rebuilt in Mainz (Federal Republic of Germany) under the direction of Erich Schott, the son of the company’s founder. Mainz becomes the headquarters and main production site of the SCHOTT Group.



Otto Schott Ernst Abbe



Erich Schott



1954

First production subsidiary outside of Germany (Vitrofarma in Rio de Janeiro, Brazil).

As of 1963

Establishment of production plants and sales offices in Western and Southern Europe. A sales office is opened in the U.S. (New York City). SCHOTT grows to become an international group of companies.

1966

First sales office in Asia (Tokio, Japan).

1969

First production plant in the U.S. (Duryea, Pennsylvania).

1974

First production plant in Asia (Penang, Malaysia).

1989

The Otto Schott Research Center in Mainz is put into operation.

1991/1995

With the reunification of Germany, SCHOTT in Mainz takes over the ownership of the old main plant in Jena. The factory is renovated, restructured and integrated into the SCHOTT Group.

As of 1993

Establishment of production plants and sales offices in Eastern Europe.

2002

First production plant in China.

2004

Conversion of the foundation enterprise to the corporation SCHOTT AG. Its sole shareholder is the Carl-Zeiss-Stiftung.

2009

125 year anniversary of SCHOTT.



1884
1945
1952
1963
1989
2009

Technological Milestones



1884

Otto Schott develops new optical glasses and provides the scientific basis for developing specialized glasses.

1884

Glass tubing for thermometer and water gauge glasses.

1887/1893

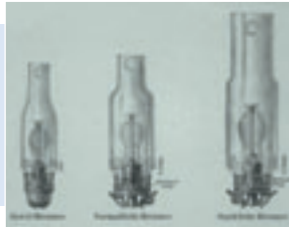
Invention of chemically resistant borosilicate glass that is able to withstand high temperatures and immediate shifts in temperature.

1894

Casting of large scale optical disks up to 140 cm in diameter for astronomical telescopes.

1895

Extremely durable cylinders made of borosilicate glass help the Auer incandescent lighting achieve its breakthrough.



1908

Glass tubing for pharmaceutical ampoules, which are distributed under the brand name **FIOLAX®** starting in 1911.

1911

SCHOTT becomes the world's first specialized glass manufacturer to adopt continuous melting in tanks.

1914

Processed flat glasses for the household appliance industry.

1918

Market launch of heat resistant household glasses that are marketed under the brand name **JENA^{er} GLAS®** as of 1921.



1923

Automated and continuous drawing of glass tubing based on the Danner process.

1923

Pharmaceutical ampoules, initially manufactured by hand, are manufactured by machine starting in 1928.

1930

Automated and continuous drawing of flat glass based on the Fourcault process.

1935

Manual production of television bulbs.

1938

Development of the first coating techniques.

1939

Glass-to-metal seals for electrotechnology.

1950

DURAN® laboratory glass becomes the new universal glass for the chemistry laboratory.

1955

Fully automated production of television glass components and hollow glass.

1957

Optical glasses from Mainz and Jena are put to use in both American and Soviet aerospace applications.



1964

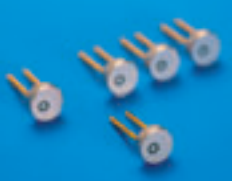
Fiber optic components for light and image guides. The main application fields are medical technology and lighting technology.

1968

ZERODUR® glass-ceramic introduces a new era of telescope mirror substrates for astronomy.

1969

Optical glasses from SCHOTT in television and photo cameras deliver spectacular photos and television images of „Apollo 11“, when Neil Armstrong and Edwin Aldrin become the first human beings to walk on the moon.



1969

Glass-to-metal seals for automotive applications.

1973

Light weight eyeglass lenses result in improvements for eyeglass wearers.



1973

SCHOTT CERAN® glass-ceramic cooking surfaces make their way into kitchens worldwide.

1978

PYRAN® fire resistant glass.

1979

The first dust removal system is put into operation on a glass melting tank. In the years that follow, SCHOTT sets standards in environmental protection.

1979

ROBAX® transparent glass-ceramic for window panels in stoves and fireplaces.

1983

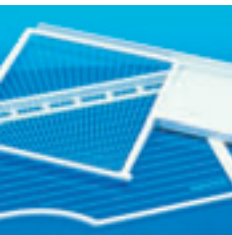
Glass tubing for solar thermal power plants based on parabolic trough technology.

1985

Anti-reflective **AMIRAN**® glass for glazing shop display windows, for example.

1986

Electronic packaging components for aviation technology.

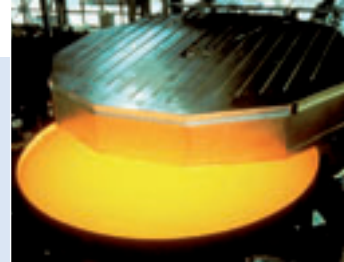


1989

Expansion of expertise in processing flat glasses for the household appliance industry by founding joint ventures with the float glass manufacturers Glaverbel (Belgium) and Gemtron (U.S.A.).

1991/1996

Manufacturing of **ZERODUR**® telescope mirror substrates with a diameter of 8.2 meters for the Very Large Telescope (VLT) in Chile, using the centrifugal casting process.



1993

Thin glasses with thicknesses that start at only 0.03 mm help advance flat display technology.

1994

Serial manufacturing of borosilicate glasses for a wide variety of applications using the microfloat process.

1996

Internally coated **SCHOTT Type I plus**® pharmaceutical vials.



1998

Calcium fluoride crystals for use in manufacturing chips.

2001

Entry into photovoltaics. The roots and technological expertise SCHOTT Solar has in the field of photovoltaics go back to the year 1958.

2002

SCHOTT CERAN® glass-ceramic cooking surfaces without harmful heavy metal additives.

2002

Serial manufacturing of prefillable polymer syringes.

2004

Backlighting glass tubes, used for background illumination of displays.

2005

Market launch of solar receivers for solar thermal power plants based on parabolic trough technology.



2008

Nomination of the solar receiver as one of three very important innovations for the German Future Prize by Germany's Federal President Horst Köhler.